

AF/1733  
ETW

OIP Docket No. FIRE.P9905052

OCT 01 2004

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

in re **PATENT** application of:

Applicants: David G. Abdallah, Jr.  
Application No.: 09/812,293  
For: RADIAL TIRE HAVING A WRAPPED BODY PLY WITH TWO  
ROWS OF REINFORCEMENT CORDS  
Filing Date: March 20, 2001  
Examiner: Adrienne C. Johnstone  
Art Unit: 1733

**REPLY BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This brief is being submitted in reply to the Examiner's Answer mailed on July 29, 2004.

Claims 2-10 and 21-23 stand finally rejected as being anticipated by Japanese Patent Application 5-294104. These claims set forth a green tire<sup>1</sup> incorporating a body ply comprising an elastomeric sheet and a plurality of rows of reinforcement cords embedded therein by extruding an elastomeric material between and around the cords in the plurality of rows. In contrast, the applied Japanese reference discloses a carcass

---

1. The Board is asked to please note that the claims are directed to a "green tire" whereby the effects of the heat of vulcanization need not be taken into consideration.

layer 2 which, according to the Examiner's translation, is actually two "half layers" 2a and 2b joined together by calendering.

The Examiner contends that in the Japanese method, "the rubber material still hot from the calender would flow around the cords of both layers, thus providing a reasonable basis for inferring that the body ply of this embodiment would be structurally indistinguishable from the claimed extruded body." **However, the Japanese reference itself asserts that its resultant product is structurally different from body plies that are not made with two separate sheets or layers.** Thus, not only is there not a reasonable basis for the Examiner's inference, there is a very reasonable basis for concluding that said body ply would be structurally distinguishable from a body ply that is not made with two separate sheets or layers. It is respectfully submitted that, regardless of the outcome of any of burden-shifting issues, the respective products are structurally and patentably distinguishable.

Claims 2-10 and 21-23 also stand finally rejected as being obvious over Japanese Patent Application 5-294104 in view of Kiemer (4,274,821), Ible (4,300,878), Sicka et al. (4,657,718), and Tompkins (5,292,472). Kiemer and Ible are cited to show that "extrusion is a notoriously well know technique for manufacturing cord reinforced plies for tires" and that it therefore would have been obvious "to use such well known alternative technique to manufacture the body ply." Sicka and Tompkins are cited to show that "one of ordinary skill in the art would be well aware of various conventional techniques of extruding rubber around multiple layers of tire reinforcing cords to form a tire reinforcing ply having multiple layers of reinforcing cords therein."

The Examiner comments that the test of obviousness is not whether features of a secondary reference may be bodily incorporated into the structure of the primary reference. The Board is asked to please note that appellant is not attempting to establish non-obviousness by showing that the specific structures of the illustrated prior art devices are not *per se* physically combinable. Instead, non-obviousness is

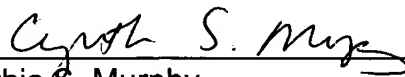
established because the combined teachings of these references would not have suggested the claimed invention to those of ordinary skill in the art.

The primary reference teaches that a flat (*i.e.*, non-tubular) body ply having plural rows of reinforcement cords can be made by laminating together calendered “single-row” layers. Kiemer and Ible teach that a single-layer single-row flat body ply can be made by extrusion. Sicka and Tompkins teach that a tubular body ply having plural rows of reinforcement cords and plural layers can be made by coextrusion. The combined teachings of these references suggest a calendered two-cord-rows and two-layer flat body ply, an extruded single-cord-row and single-layer flat body ply, or a coextruded two-cord-row and two-layer tubular flat body ply. The combined teachings do not show or suggest a green tire incorporating a body ply having edges forming an axially extending seam, wherein the body ply comprises an elastomeric sheet and a plurality of rows of reinforcement cords embedded therein by extruding an elastomeric material between and around the cords in the plurality of rows. Neither Sicka nor Tompkins provide any insight that the Kiemer extrusion die, the Ible extrusion die, or any extrusion die producing a non-tubular ply, can be modified to accommodate more than one row of reinforcement cords.

In view of the foregoing, appellant again respectfully submits that the claims are patentable over the applied art and that the final rejection should be reversed. This brief is being submitted in triplicate. Should a petition for an Extension of Time be necessary for the timely filing of this brief (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988, Order No. FIRE.P9905052US.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

  
\_\_\_\_\_  
Cynthia S. Murphy  
Registration No. 33,430

1621 Euclid Avenue  
Nineteenth Floor  
Cleveland, Ohio 44115  
(216) 621-1113

**CERTIFICATE OF MAILING**

I hereby certify that this paper (along with any paper or item referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first-class mail in an envelope addressed to Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: September 28, 2004

  
\_\_\_\_\_  
Claudia A. Bader

R:\CSM\FIRE\IP9905052\IP990552US.r06.reply brief.wpd

## **APPENDIX A**

2. A green tire as set forth in claim 21, wherein the reinforcement cords in one row are transversely staggered relative to the reinforcement cords in an adjacent row.

3. A green tire as set forth in claim 2, wherein the plurality of rows are two parallel rows of reinforcement cords.

4. A green tire as set forth in claim 21, wherein the plurality of rows are two parallel rows of reinforcement cords.

5. A green tire as set forth in claim 21, wherein the elastomeric sheet is made of rubber.

6. A green tire as set forth in claim 21, wherein the sheet has a thickness of about 0.5 mm to about 2.0 mm.

7. A green tire as set forth in claim 6, wherein the sheet has a width of about 150 mm to about 250 mm.

8. A green tire as set forth in claim 21, wherein each row has between about 50 to about 600 cords.

9. A green tire as set forth in claim 8, wherein the cords each have a diameter of about 0.3 mm to about 2.0 mm.

10. A green tire as set forth in claim 9, wherein the reinforcement cords in each row are spaced from adjacent reinforcement cords in the same row a distance of about 0.1 mm to about 3.8 mm.

21. A green tire incorporating a body ply comprising an elastomeric sheet and a plurality of rows of reinforcement cords embedded therein by extruding an elastomeric material between and around the cords in the plurality of rows, the body ply having edges forming an axially extending seam, wherein each of the reinforcement cords has a diameter  $d$ , wherein adjacent cords in a first of the plurality of rows are spaced a distance  $d_{a-a}$  and wherein adjacent cords in a second of the plurality of rows are spaced a distance  $d_{b-b}$  and wherein these distances are equal and uniform.

22. A green tire as set forth in claim 21, wherein the body ply has sliced edges forming the axially extending seam.

23. A green tire as set forth in claim 21, wherein the reinforcement cords extend substantially parallel to the axis of the green tire.